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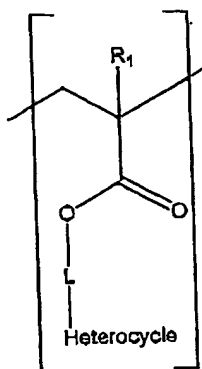
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CLAIMS

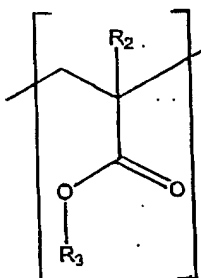
1. A polymeric compound comprising at least one monomer unit of Formula I



Formula I

- wherein R_1 is H or a C_{1-10} hydrocarbyl group;
 5 wherein L is an optional C_{1-30} hydrocarbyl linker group; and
 wherein heterocycle is an optionally substituted heterocyclic ring.

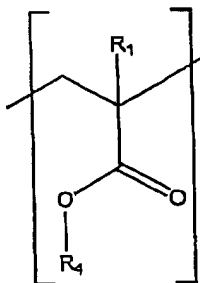
2. A polymeric compound according to claim 1 further comprising at least one monomer unit of Formula II



Formula II

- 10 wherein R_2 is H or a C_{1-10} hydrocarbyl group; and
 wherein R_3 is a C_{1-30} hydrocarbyl group.

3. A polymeric compound according to claim 1 or claim 2 further comprising at least one monomer unit of Formula III



Formula III

- 15 wherein R_1 is H or a C_{1-10} hydrocarbyl group; and

wherein R_4 is a C_{2-10} unsaturated hydrocarbyl group.

4. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring comprises at least one nitrogen.

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5. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring comprises at least one tertiary nitrogen.

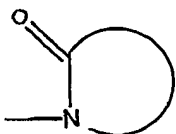
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6. A polymeric compound according to claim 4 or 5 wherein the at least one nitrogen of the heterocyclic ring has a bond to an atom of the linker group L.

7. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring comprises at least one amide functional group.

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8. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring is of Formula IV



Formula IV

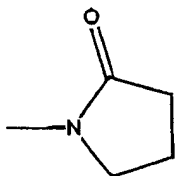
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9. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring is a 4 to 10 membered ring.

10. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring is a 4, 5 or 6 membered ring.

25

11. A polymeric compound according to any one of the preceding claims wherein the heterocyclic ring is of Formula V



Formula V

12. A polymeric compound according to any one of the preceding claims wherein L is a C_{1-20} hydrocarbyl linker group.

13. A polymeric compound according to any one of the preceding claims wherein L is a C₁₋₁₀ hydrocarbyl linker group.

5 14. A polymeric compound according to any one of the preceding claims wherein L is a C₄₋₁₀ hydrocarbyl linker group.

15. A polymeric compound according to any one of the preceding claims wherein L is a hydrocarbon linker group.

10

16. A polymeric compound according to any one of the preceding claims wherein L is a straight chained or branched hydrocarbon linker group having the formula (C_xH_{2x}) wherein x is an integer.

15 17. A polymeric compound according to any one of the preceding claims wherein L is (CH₂)₄.

18. A polymeric compound according to any one of the preceding claims wherein R₁ is H or a C₁₋₅ hydrocarbyl group.

20

19. A polymeric compound according to any one of the preceding claims wherein R₁ is H or a hydrocarbon group.

20. A polymeric compound according to any one of the preceding claims wherein R₁ is H or an alkyl group.

25

21. A polymeric compound according to any one of the preceding claims wherein R₁ is H or methyl.

30 22. A polymeric compound according to any one of claims 2 to 21 wherein R₂ is H or a C₁₋₅ hydrocarbyl group.

23. A polymeric compound according to any one of claims 2 to 22 wherein R₂ is H or a hydrocarbon group.

35

24. A polymeric compound according to any one of claims 2 to 23 wherein R_2 is H or an alkyl group.

5 25. A polymeric compound according to any one of claims 2 to 24 wherein R_2 is H or methyl.

26. A polymeric compound according to any one of claims 2 to 25 wherein R_3 is a C_{1-25} hydrocarbyl group.

10 27. A polymeric compound according to any one of claims 2 to 26 wherein R_3 is a C_{5-25} hydrocarbyl group.

28. A polymeric compound according to any one of claims 2 to 27 wherein R_3 is a hydrocarbon group.

15 29. A polymeric compound according to any one of claims 3 to 28 wherein R_4 is a C_{2-5} unsaturated hydrocarbyl group.

20 30. A polymeric compound according to any one of claims 3 to 29 wherein R_4 is an unsaturated hydrocarbon group.

31. A polymeric compound according to any one of claims 3 to 30 wherein R_4 comprises a terminal carbon-carbon multiple bond.

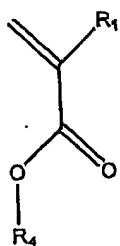
25 32. A polymeric compound according to any one of claims 3 to 31 wherein R_4 is an ethenyl group.

33. A polymeric compound according to any one of the preceding claims wherein monomer units of Formula I and/or monomer units of Formula II and/or monomer units of
30 Formula III comprise at least 70% by weight of the polymeric compound.

34. A polymeric compound according to any one of the preceding claims wherein the molecular weight (M_n) of the polymeric compound is from 20,000 to 90,000.

35 35. A process for producing a polymeric compound comprising the steps of

(i) polymerising monomer A



Monomer A

wherein R_1 and R_4 are as defined in any one of the preceding claims; and

(ii) reacting the product of step (i) with compound C

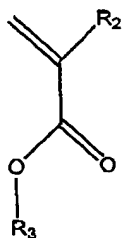


Compound C

wherein R_5 is a C_{2-10} unsaturated hydrocarbyl group; and

wherein heterocycle is an optionally substituted heterocyclic ring.

36. A process according to claim 35 wherein, in step (i), monomer A is copolymerised with monomer B



Monomer B

wherein R_2 and R_3 are as defined in any one of claims 2 to 35.

37. A process according to claim 35 or claim 36 wherein R_5 is a C_{2-5} unsaturated hydrocarbyl group.

38. A process according to claim 35, 36 or 37 wherein R_5 is an unsaturated hydrocarbon group.

39. A process according to any one of claims 35 to 38 wherein R_5 comprises a terminal carbon-carbon multiple bond.

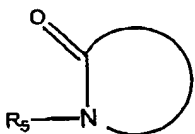
40. A process according to any one of claims 35 to 39 wherein R_5 is an ethenyl group.

41. A process according to any one of claims 35 to 40 wherein the heterocyclic ring of compound C comprises at least one nitrogen.

5 42. A process according to any one of claims 35 to 41 wherein the heterocyclic ring of compound C comprises at least one tertiary nitrogen.

43. A process according to any one of claims 35 to 42 wherein the heterocyclic ring of compound C comprises at least one amide functional group.

10 44. A process according to any one of claims 35 to 43 wherein compound C is of Formula VI



Formula VI

wherein R_5 is as defined in any one of claims 35 to 43.

15 45. A process according to any one of claims 35 to 44 wherein the heterocyclic ring of compound C is a 4 to 10 membered ring.

46. A process according to any one of claims 35 to 45 wherein the heterocyclic ring of compound C is a 4, 5 or 6 membered ring.

20 47. A process according to any one of claims 35 to 46 wherein compound C is N-vinylpyrrolidone.

48. A polymeric compound obtained or obtainable by the process according to any one of claims 35 to 47.

25

49. A fuel additive composition comprising

(i) a polymeric compound as defined in any one of claims 1 to 34 or 48; and

(ii) a metal deactivator and/or an antioxidant.

30 50. A fuel additive composition according to claim 49 comprising a metal deactivator and an antioxidant.

51. A fuel composition comprising

(i) a fuel; and

(ii) a polymeric compound as defined in any one of claims 1 to 34 or 48, or a fuel additive composition as defined in claim 49 or 50.

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52. A fuel composition according to claim 51 wherein the fuel is a jet fuel.

53. A fuel composition according to claim 51 or 52 wherein the polymeric compound is present in an amount of 15 to 30mg/L.

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54. Use of a polymeric compound as defined in any one of claims 1 to 34 or 48 or a fuel additive composition as defined in claim 49 or 50, for

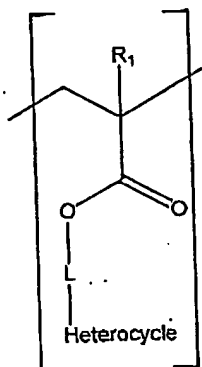
(i) the inhibition of oxidation of a fuel composition as defined in any one of claims 51, 52 or 53; and/or

15 (ii) the inhibition of deposit formation in a fuel composition as defined in any one of claims 51, 52 or 53; and/or

(iii) the inhibition of particle formation from the oxidation product(s) of a fuel composition as defined in any one of claims 51, 52 or 53; and/or

20 (iv) the solubilisation of deposits and/or deposit precursors in a fuel composition as defined in any one of claims 51, 52 or 53.

55. A method for inhibiting deposit formation in a fuel at a temperature of from 100 to 335°C, the method comprising combining with the fuel a polymeric compound comprising at least one monomer unit of Formula I



Formula I

25 wherein R_1 is H or a C_{1-10} hydrocarbyl group;

wherein L is an optional C_{1-30} hydrocarbyl linker group; and

wherein heterocycle is an optionally substituted heterocyclic ring;

or a fuel additive composition as defined in claim 49 or 50.

56. A method according to claim 55 wherein the polymeric compound is as defined in any one of claims 2 to 34.

5

57. A polymeric compound substantially as hereinbefore described with particular reference to any one of the Examples.

10

58. A process substantially as hereinbefore described with particular reference to any one of the Examples.

59. A fuel additive composition substantially as hereinbefore described with particular reference to any one of the Examples.

15

60. A fuel composition substantially as hereinbefore described with particular reference to any one of the Examples.

61. A use substantially as hereinbefore described with particular reference to any one of the Examples.